

Response to Ofgem Call for Input on Locational Pricing Assessment

About BUUK

BUUK Infrastructure is the leading independent provider of last mile networks, constructing and operating essential utility assets in Great Britain. We own and operate electricity independent distribution networks (IDNO), independent gas networks (IGT), as well as heat, water and telecoms networks.

IDNOs operate across the GB footprint any changes to locational pricing that have the potential to impact on the locational granularity of DUoS charges are of particular importance to us as we will need to facilitate such changes across each of the 14 GSP groups, whereas DNOs will only need to facilitate changes within the GSP group linked to their relevant Distribution Service Areas (DSAs).

Overview

We note that Ofgem are undertaking this assessment as part of its 'Full Chain Flexibility Strategic Change Programme' to provide an answer to the 'Central Question': "*Will introducing locational granularity into the wholesale electricity market enable a fully flexible, low carbon, low-cost system?*". We also note that Ofgem sets out that to date, participation in its workshops has been limited to select attendees with the ambition that they will reflect the diverse range of stakeholder interests. We are concerned that this ambition has not been achieved, and that the impact that transition to nodal/zonal charging will have on electricity distributors, and to consumers connected to their networks, has not been fully identified or considered.

To date, work is focused at the transmission level. We are concerned that such work has not considered the impact on distributors and the potential whole system impact on end consumers. Ofgem's proposed future workshops do not appear to look at these areas. We set out key concerns in more detail below.

Mapping of Consumers to transmission Nodes or Zones

Currently MPANs identify the connectivity of consumers to a GSP group, with consumers use of energy similarly mapped across the GSP group. The options identified by current work suggest that a DSA may have one or more network zones or nodes, and that a network zone or node may cut across more than one DSA. To facilitate the transition to locational pricing MPANs relating to distribution connected generators or consumers will need to map MPANs to the relevant zone or node. Whilst such mapping is possible, It is essential that any assessment considers what system changes may be required to facilitate the transition to zonal/ nodal pricing, along with the relevant costs and timeframes to implement such changes.

Impact of the DUoS Reform SCR

Ofgem's call for input acknowledges that a significant code review (SCR) of DUoS charge reform is being undertaken in parallel. The DUoS Reform SCR will pick up on work previously

undertaken as part of Ofgem's Access review. We understand that Ofgem was previously considering a move to more locational granularity for DUoS charges. If this is still Ofgem's view then locational pricing in the wholesale market will need to dovetail with those given through DUoS charges. Failure to consider a whole system impact could result in locational pricing messages given through DUoS charges conflicting or diluting locational pricing messages in the wholesale market, and vice versa.

Locational Elasticity of generators and consumers.

Ultimately the burden of locational pricing will be borne by consumers and generation. Therefore any assessment needs to consider the wider system impacts on consumers and generators. This includes societal impacts on certain classes of customer.

It is important to consider whether the locational elasticity is the same for all classes of consumers and generators, and whether the locational pricing signals would be the same (*why wouldn't they be?*). If locational pricing signals required to overcome locational inelasticity are significant, then consumers who are unable to resite or relocate (because of exogenous factors) could end up paying very high charges. Whilst this may be acceptable from an economic perspective, it may be societally unacceptable for some classes of customer. We note that there is already a DUoS cross subsidy to customers in the north of Scotland to mitigate high charges.

Temporal Volatility of Locational Pricing

For locational pricing to give effective messages, the prices need to be stable over significant time periods (years). Investment to demand and generation connections are typically long run. If zonal/nodal locational prices are likely to be volatile over the investment time frames for connections then the pricing signal is significantly undermined

Response to Ofgem Questions

The key opportunities associated with introducing more granular locational pricing in GB

The opportunity is to put in place locational pricing regimes that remove perverse incentives on generators or on demand customers to locate in areas (transmission or distribution) that exacerbate network constraints.

Locational granular pricing models should provide appropriate signals to incentives reduction in whole system constraints and costs.

The key implementation challenges, risks and mitigations

Locational price signals across distribution and transmission need to be considered as the whole. There is a need to consider how local and national balancing integrates so that measures to relieve congestion at a local level do not cause constraints at a national level; or that measures to relieve congestion at the transmission level do not cause unintended congestion at the distribution level.

Clarification is required as to whether any move to locational charges would impact all classes of customer (e.g. would it drill down to charges to domestic consumers). In any modelled outcomes fairness to consumers and generators should be a key assessment criterion.

We think that many classes of demand customer will be locationally inelastic and unable to respond to pricing signals. If this is the case, then the value of locational pricing would appear to be diluted.

Whilst in practice there will be linkages, the assessment needs to consider the benefits arising from locational flexibility needs to be considered separately from operational flexibility.

The proposed approach to modelling zonal and nodal market designs

A full impact assessment of the modelled approaches is required to quantify the costs along with the benefits. It is not clear that the elasticity of location for generation and demand has been identified, and what bandwidth in locational pricing would be required to stimulate the desired outcomes.